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THE CUBAN ECONOMY: CURRENT SITUATION, AND PROSPECTS FOR THE 198--ETC(U)
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EXECUTIVE SUMMARY

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The Cuban Economy: Current Situation, and Prospects for the 1980s.

by Carmelo Mesa-Lago

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The Cuban economy performed much worse in 1976-80 than in 1971-75, the dynamism of foreign trade slowed down and the degree of trade-partner concentration worsened in the second period. There was an overwhelming percentage of unfulfilled output targets in the 1976-80 plan and the degree of unfulfillment was extremely high. In the social sector there was continued improvement and fulfillment/overfulfillment in education and health but housing and day-care center building targets were unfulfilled. Thus we may conclude that the 1976-80 plan was a dismal failure in economic terms and had mixed results in social terms.

There were nine reasons behind the economic failure of the 1976-80 plan: (1) the sharp decline in the value of Cuban exports (mostly of sugar) and increase in the value of imports which at the outset affected the feasibility of the plan; (2) plan targets were too ambitious and investment, although apparently high, had a low efficiency; (3) natural phenomena like pests and hurricanes afflicted agriculture; (4) the plan to mechanize sugarcane cutting and expand mill capacity lagged behind; (5) in the nonsugar sector, two key lines of production, nickel and fishing, encountered serious difficulties; (6) the introduction of the new management and planning system suffered significant delays and complications; (7) the distribution of consumer goods deteriorated in 1979-80 and the visit of Cuban exiles made the scarcities more evident;

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(8) the labor force was affected by lack of discipline, low productivity and unemployment; and (9) the African campaigns resulted in economic costs.

The analysis of the feasibility of output targets for 1981-85 suggests that, in spite of a first impression of planners' caution, most of the goals are too optimistic. Out of the twenty targets for 1985, I estimate that: eleven will be unfulfilled by a significant degree (sugar, nickel, citrus, steel, cement, textiles, electricity, radios, fishing, and salt); six will be close to fulfillment (tobacco and coffee--if private incentives continue--, milk, fertilizers, shoes and pork); and two will be over-fulfilled (eggs and tobacco).

In the area of foreign trade, the five-year plan forecasts that trade with the USSR will increase from 63 to 65 percent but that trade with other socialist countries should decline from 13 to 4 percent, while trade with market economies should increase from 23 to 31 percent. The trade deficit planned by Cuba for 1981-85 is about 1.5 billion pesos, similar to the deficits in the previous two quinquenniums. Since Cuba is planning to increase its trade with the USSR (and if the 1979-80 trend continues), most of that deficit will be with the Soviets. The planned increase in trade with market economies is probably based on the expectation of high sugar prices and surplus or balanced trade with the West. This would be extremely important for Cuba because by 1979 its debt with western countries was about \$3 billion, resulting in an annual payment of \$150 million in debt service. In the 1981 Cuban budget the line which shows the highest rise over 1980 is "other activities" with a 2.2 percentage point increment; that line was previously called "payment of the public debt."

Vital for Cuba's economic development in the next five years is the supply of oil, practically all of which is imported from the USSR taking from 11 to 13 percent of Soviet deliveries to all COMECON countries. According to Castro, the USSR has indeed guaranteed 97 percent of the oil supply in the next quinquennium, but he has reported a planned increase of 10 to 15 percent of available fuel in 1981-85 or 2 to 3 percent annually. This appears as a significantly lower rate than that of the 1970s.

There is a possibility of some modest increases in sugar prices in the next five years depending on world sugar supply. If Cuba's planned increases in sugar output materialize in 1982-85 they will reduce the world deficit, pushing sugar prices down.

A series of reforms introduced in 1980 has increased incentives to raise productivity among workers and farmers. These reforms are positive but often the stimuli are not strong enough and in other cases conflict with politically or ideologically motivated priorities and policies.

There is still a Spartan, frugal spirit in the leadership's policies in the third decade, not too different in this sense from the previous two, with predominant pragmatism and caution but amazing resilience of ideology and romanticism.

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THE CUBAN ECONOMY: CURRENT SITUATION,
AND PROSPECTS FOR THE 1980S

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Pittsburgh, June 1981

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At the beginning of the year 1979, the Cuban economy entered its third decade under the Revolution. At the end of 1980, the Second Congress of the Cuban Communist Party was held and guidelines for the Cuban economy in the next quinquennium and until the year 2000 were elaborated. In April 1981 there was another important celebration: the twentieth anniversary of the proclamation of the socialist nature of the revolutionary process. The socialist economy of the largest island of the Caribbean has reached adulthood, and a fresh review of its current situation and its future outlook is in order. I have recently examined Cuba's socioeconomic performance in the first two decades of the Revolution (1959-78) and this essay will not duplicate that work.¹ And yet vital statistics and documents published in 1980, plus the time perspective, allow now a thorough evaluation of the first five-year plan (1976-80), a task I could not fully accomplish before. This essay will appraise the fulfillment/unfulfillment of the 1976-80 plan and analyze the reasons behind its success/failure; it also will study the second five-year plan (1981-85) and the feasibility of its major goals, and will discuss some of the conflicts that the Cuban economy will face in the 1980s.

THE FIRST FIVE-YEAR PLAN: SUCCESS OR FAILURE?

In spite of the fact that Cuba has elaborated two five-year plans, one four-year plan (1962-65), and at least a dozen annual plans, a very small number of quantitative targets have been made known. Thus the evaluation of the overall success or failure of the 1976-80 plan is not an easy task. Table 1 contrasts actual performance in 1971-75 (first period) and 1976-80 (second period) and the goals for 1976-80 in three crucial economic areas: macroeconomic, foreign trade and social indicators.

Both the macroeconomic and foreign trade data, given in Cuban pesos, are affected by inflation in an unknown magnitude. Cuban officials claim that these

TABLE 1

Selected Cuban Socioeconomic Indicators: Actual Performance and Goals 1971-1985

	<u>Actual Performance</u>		<u>Planned Goals</u>	
	1971-75	1976-80	1976-80	1981-85
<u>Macroeconomic Indicators</u>				
Global Social Product ^a	13.7	4.0	6.0	5.1
Investment (billion pesos)	7.5	13.2	15.0	15.2-15.8
Labor productivity ^a	9.0	4.0	7.0	3.3
<u>Foreign Trade Indicators</u>				
Exports ^a	29.4	6.6	- - -	7.0
Imports ^a	21.3	6.5	- - -	6.8 ^d
Cumulative deficit (billion pesos)	1.4	1.6	- - -	1.5 ^d
Percent of trade with:				
USSR ^c	46	63	- - -	65 ^d
All socialist ^c	65	76	- - -	69 ^d
Increment of trade with:				
USSR ^b	66	173	40-50	50
All socialist ^b	56	143	- - -	30
<u>Social Indicators</u>				
Enrollment middle schools (thousands) ^e	338	759 ^f	873	895 ^d
Inhabitants per physician ^e	1,008	626	750-790	500-550
Housing ^g	79,685	82,934	150,000	200,000
Day-care centers ^e	658	802 ^f	1,050	950 ^d

a Annual average growth rate.

b Total percentage increase over previous period.

c Average for the period.

d Estimate.

e Figures in the year at the end of the period.

f 1979.

g Total number built in the period.

Sources: C. Mesa-Lago, The Economy of Socialist Cuba: A Two Decade Appraisal (Albuquerque: University of New Mexico Press, 1981); Comité Estatal de Estadísticas, Cuba en Cifras 1979 (La Habana, 1980); Banco Nacional de Cuba, Highlights of Cuban Economic Development 1976-1980 and Main Targets for 1981-1985 (Havana, 1981); Proyecto de Lineamientos Económicos y Sociales para el Quinquenio 1981-1985 (La Habana, 1980); and Bohemia, January 2, 1981, pp. 56-57.

data are, in practice, given in constant pesos but I have argued elsewhere that they are partly affected by "socialist inflation" and hence are in current pesos. My crude evaluation is that inflation was significantly reduced in 1971-75 but increased in 1976-80, hence figures for the second period are somewhat inflated. This makes even more shocking the more than two-thirds decline of the average growth rate of GSP in the second period (4 percent) over the first period (13.7 percent); also the 1976-80 growth goal was unfulfilled by one-third. On the other hand, investment increased by 75 percent in the second period but still fell 12 percent short of the target (more on this later). Labor productivity in the second period was less than one-half the rate of the first period and fell 43 percent short of the goal. In the second period, the average growth rate of exports declined by 78 percent and that of imports by 70 percent, while the cumulative deficit grew slightly. Trade-partner concentration with the USSR (and socialist countries) sharply increased in 1976-80. There are no data to evaluate goal performance on trade. In general the two combined sets of economic indicators clearly show (with the exception of investment) a severe deterioration in the second period and a very significant unfulfillment of plan goals.

Performance in the social sphere was better but mixed. The principal health indicator shows that the target was overfulfilled: the number of inhabitants per physician in 1980 was reduced further than planned. The 1980 goal of enrollment in middle schools was probably fulfilled. On the other hand, although the total number of dwellings built in 1976-80 was slightly higher than in the previous period, the plan target was unfulfilled by almost one-half. The target of day-care center construction was also unfulfilled probably by 20 percent. Unfortunately we do not have official aggregate data available on consumption per capita although various analyses conducted outside of Cuba suggest that the distribution of basic consumer goods peaked in the first half of the 1970s mostly in 1975-76 (more on this later).

Table 2 presents data on the physical output of twenty-two products important both for domestic consumption and exports. Production in 1979/80 was higher than in 1975 for thirteen products, while it was smaller for eight products and stagnant for one. This was a deterioration in relation to the performance in the previous period: in 1975 production was higher than in 1970 for eighteen products, for two was stagnant and declined for only two. A comparison between actual output in 1980 (or 1979 when 1980 was not available) and sixteen output targets available for 1980 shows that fourteen of the targets were unfulfilled and only two of the targets were fulfilled. Furthermore, for nine of the unfulfilled targets, actual output was from 40 to 63 percent below the target while for the other five the degree of unfulfillment fluctuated from 20 to 39 percent; overfulfillment of the two targets was 5 and 12 percent.

In summary, tables 1 and 2 show that: the Cuban economy performed much worse in 1976-80 than in 1971-75, the dynamism of foreign trade slowed down and the degree of trade-partner concentration worsened in the second period; there was an overwhelming percentage of unfulfilled output targets in the 1976-80 plan and the degree of unfulfillment was extremely high; in the social sector there was continued improvement and fulfillment/overfulfillment in education and health but housing and day-care center building targets were unfulfilled. Therefore we may conclude that the 1976-80 plan was a dismal failure in economic terms and had mixed results in social terms.

There were nine reasons behind the economic failure of the 1976-80 plan: (1) the sharp decline in the value of Cuban exports (mostly of sugar) and increase in the value of imports which at the outset affected the feasibility of the plan; (2) plan targets were too ambitious and investment, although apparently high, had a low efficiency; (3) natural phenomena like pests and hurricanes afflicted agriculture; (4) the plan to mechanize sugarcane cutting and expand mill capacity lagged behind; (5) in the nonsugar sector, two key

TABLE 2

Physical Output of Selected Products in Cuba: 1960-1980, and 1980 and 1985 Goals
(In thousand metric tons unless specified)

Products	ACTUAL OUTPUT									Goals	
	1960	1965	1970	1975	1976	1977	1978	1979	1980	1980	1985
Sugar	5943	6156	8538	6314	6155	6485	7350	7992	6787	8-8700	9.5-10
Tobacco	45	43	32	41	51	46	40	33	5	60	55
Citrus fruits	73	160 ^d	124 ^f	182	199	177	192	186	400 ^h	550	1300
Coffee	42	24	20	18	19	16	13	22 ^g	24	---	46
Eggs (MU)	430	920	1509	1851	1829	1846	1924	2018	2100	2000	2300
Rice	323	50	291	338	335	334	344	390	---	600	630-640
Beans	37	11	5	5	3	2	2	2	2 ^g	---	35
Pork	38	48	15	43	52	58	61	60	50 ^g	80	85
Milk	767	575	380	591	682	722	783	791	---	1000	1000-1300
Fish	31	40	106	143	193	184	211	155	186	350	300
Nickel	13	28	37	37	37	37	35	32	37	100	69
Salt	59	106	89	157	151	129	130	122	131	---	600
Electricity (Mkwh)	2981	3387	4888	6583	7192	7707	8481	9391	10,100 ^g	9000	15000
Steel	63	36	140	298	250	330	336	328	256 ^g	440	1800-2000
Cement	813	801	742	2083	2501	2656	2711	2650 ^g	2880 ^g	5000	4900
Fertilizers	438 ^c	860 ^e	577	749	798	863	946	873	1000 ^g	---	1250
Textiles (Mm ²)	116 ^c	96	78	144	139	152	156	151	152	260-280	325
Shoes (M)	14	16	16	23	21	15	18	18 ^g	21	35	29
Soap	34 ^c	37	33	41	43	35	38	34	16 ^g	---	---
Refrigerators (TU)	0	12	6	50	44	46	45	55	30 ^g	100	---
Radios (TU)	0	82	19	113	92	120	121	143	194 ^g	300	500
Cigars (MU)	591 ^a	657	364	383	359	352	354	294	50 ^g	---	360

a 1959 b 1961 c 1963 d 1966 e 1969 f 1971 g estimate based on official data
h doubtful M = millions T = thousands U = units H = hectolitres m² = square meters
kwh = kilowatts/hour

Sources: Output from Boletín Estadístico de Cuba, 1968-1971, Anuario Estadístico de Cuba 1972-1978, Cuba en Cifras 1979, and Fidel Castro, "Main Report to the 2nd Congress of the Communist Party of Cuba," Granma Weekly Review, December 28, 1980, pp. 6-16. Goals for 1980 from Comité Central del PCC, Directivas para el Desarrollo Económico y Social del País en el Quinquenio 1976-1980: Tesis y Resolución (La Habana, 1976). Goals for 1985 from Proyecto de los Lineamientos Económicos y Sociales para el Quinquenio 1981-1985 (La Habana, 1980); Castro, pp. 6-16; and Banco Nacional de Cuba, Highlights of Cuban Economic Development 1976-80 and Main Targets for 1981-85 (Havana, January 1981).

lines of production, nickel and fishing, encountered serious difficulties; (6) the introduction of the new management and planning system suffered significant delays and complications; (7) the distribution of consumer goods deteriorated in 1979-80 and the visit of Cuban exiles made the scarcities more evident; (8) the labor force was affected by lack of discipline, low productivity and unemployment; and (9) the African campaigns resulted in economic costs. An analysis of these problems follows.

1. Deterioration in the Terms of Trade

Sugar remains the single most important product of the Cuban economy and in the second half of the 1970s made up 86 percent of the value of Cuba's exports. Fidel Castro recently said: "... we must admit that our economy today revolves around the sugar industry . . . other [economic] branches are growing . . . but nothing can be compared to the thousands of millions of pesos in foreign exchange that the sugar industry contributes."² The guidelines for the 1981-86 plan state: "The nation exports fundamentally a semi-elaborated product: raw sugar. The other exports still have a minor importance."³ Asked why, twenty-one years after the Revolution, Cuba was still "absolutely dependent on sugar", the Vice-President of the Central Planning Board (JUCEPLAN) referred to the percentage of Cuba's exports generated by sugar and acknowledged: "Seen from that angle, we continue to be to a large extent dependent on sugar. . . . There is no other branch of the Cuban economy that can compete with sugar. [It] would be a terrible mistake . . . to give sugar up just so as not to be labeled a monoexporting country."⁴

Although the USSR has paid considerably more (from 27 to 421 percent) for Cuban sugar imports than the international market price (see Table 3), Cuba still exports about 28 percent of its sugar to the world market and hence is affected by its fluctuations. In 1974 when Cuban planners had almost completed

TABLE 3

Sugar Prices in the International Market and the USSR-Cuban Agreement: 1970-1981
(in U.S. cents per pound)

Years	International market price ^a	Soviet price paid to Cuba	Difference
1970	3.75	6.11	+ 2.36
1971	4.53	6.11	+ 1.58
1972	7.43	6.11	- 1.32
1973	9.63	12.02	+ 2.39
1974	29.96	19.64	-10.32
1975	20.50	30.40	+ 9.90
1976	11.57	30.95	+19.38
1977	8.10	35.73	+27.63
1978	7.81	40.78	+32.97
1979	9.65	44.00	+34.35
1980	28.66	- - -	+26.78
1981 ^b	24.80	- - -	- - -

a Free market price (f.o.b.) Caribbean ports.

b First quarter.

Sources: International market price, IMF, International Finance Statistics (1970-March 1981) and New York Times, April-May 1981. Soviet price from Boletín Estadístico de Cuba 1970-71, Anuario Estadístico de Cuba 1972-1978 and CEPAL, "Cuba: Notas para el estudio económico de América Latina 1980," MEX/1044/9 Abril 1981, pp. 23-24.

the first five-year plan, the price of sugar in the international market had reached an historical height of almost 30 cents per pound and, in November of that year, the price peaked at 65 cents. In 1975, when the plan was already being discussed in the central ministries, the price of sugar began to decline but the average for the year was still more than 20 cents per pound. Eugenio R. Balari, Director of Cuba's Institute of Domestic Demand, told me in 1979 that the planners had prepared three variants of the plan—optimistic, fair and pessimistic—according to "possible" sugar price fluctuations; they had to choose the worst variant and still, because prices declined more than expected, twenty-two investment projects were hurt.⁵ Fidel Castro has complained that according to "all the experts" the price of sugar "would never drop below 16 to 17 cents per pound" but it actually declined to 9 cents per pound by the end of 1976. Hence, in the first year of the plan the sugar sector generated one-half of what was expected.

The value of Cuban exports in 1976 declined and, in spite of significant suspension in contracted imports, the latter increased slightly, thus the trade deficit almost tripled and, in 1977, became the second highest in history (see Table 4). By September 1976 Castro warned that the plan goals would not be met. Although the price of sugar in the international market increased again in the second half of 1979 and reached a second historical height (36 cents per pound) in the fourth quarter of 1980, the price of imports skyrocketed as did freight and rental fees for merchant vessels, thus large trade deficits continued although at lower levels than in 1976-77. To cope with this problem, in 1977-78 Cuba had to negotiate short-term loans in the capitalist market for "hundreds of millions" of dollars, which in turn forced a substantial increase in debt service payments; in 1979, however, only \$40 million could be raised and most of it had to be used to pay the debt service.⁶

TABLE 4

Foreign Trade of Cuba: 1974-1980

Years	In Million Pesos				Percentage of			
	Exports (f.o.b.)	Imports (c.i.f.)	Total Transactions	Trade Balance	Total Trade with USSR	Other Socialist	Trade Deficit with USSR	Other Socialist
1974	2,236	2,226	4,462	+ 11	41	18	100	0
1975	2,947	3,113	6,060	-166	48	12	0	0
1976	2,692	3,180	5,872	-488	53	14	0	0
1977	2,918	3,461	6,379	-543	62	13	0	13
1978	3,417	3,558	6,974	-141	69	13	0	33
1979	3,493	3,687	7,180	-194	69	15	54	11
1980	3,977	4,246	8,223	-269	62	12	47	53

Sources: Anuario Estadístico de Cuba 1976-1978; statistics supplied by the State Committee on Statistics to the author in July 1979; and Banco Nacional de Cuba, Highlights of Cuban Economic Development 1976-1980 and Main Targets for 1981-1985 (Havana, 1981).

Table 4 shows Cuba's increasing trade dependency on the USSR in the second half of the 1970s: while in 1974 only 41 percent of Cuba's trade was with the USSR, that proportion steadily grew reaching 69 percent in 1978-79. This was the result of the decline in sugar prices in the international market and the parallel increase of Soviet subsidies to Cuban sugar imports. (But in 1980 when sugar prices in the international market began to rise, the proportion of Cuba's trade with the USSR declined.) In 1975 the USSR introduced an adjustment trade mechanism in its trade with Cuba: it increased the price of sugar imports (with a minimum of 500 rubles per ton) proportionally to the increase in prices of a group of Soviet exports (e.g., steel, oil, foodstuffs, machinery). While in 1974 100 percent of Cuba's trade deficit was with the USSR, in 1975-78, as a result of the adjustment mechanism, the deficit entirely disappeared. Surprisingly, in 1979 the USSR again held the majority of Cuba's trade deficit (54 percent) and in 1980 the totality of that deficit was with the USSR (47 percent) and other socialist countries (53 percent). The Economic Commission for Latin America (ECLA) has reported that the reappearance of the huge deficit with the USSR "was due to the increase in Cuba's imports and the decline in the value of exports." This explanation is not satisfactory since the adjustment mechanism should precisely have taken care of that and because the value of sugar exports actually increased in 1979-80. ECLA adds, however, that while in 1975-77 Cuba's terms of trade with the USSR were constant, they deteriorated in 1979 due, among other reasons, to a "substantial modification of the contractual base which served to establish the adjustment mechanism, by disconnecting the price paid for sugar from Soviet exports to Cuba."⁷ Unfortunately this is the only information we have on this crucial arrangement; if true it means that the generous conditions provided by the USSR in 1975-78 have been suspended or at least substantially modified.

2. Ambitious Targets and Investment Inefficiency

The previous discussion shows that a substantial part of the resources Cuba expected in 1976-80 did not materialize and this, in turn, made impossible the acquisition of equipment and inputs necessary to fulfill many of the plan's targets. But, as Table 2 suggests, a good number of the targets were set too high to begin with. A top Cuban planner said in 1980 that the statistical base for the first five-year plan was "not very reliable in many cases" and this was compounded with "errors of subjectivism"; thus as reality became evident, JUCEPLAN had to adjust the targets downwards in successive annual plans.⁸

According to Castro, investment in 1976-80 totalled 13.2 billion pesos and was only 12 percent short of the initial target of 15 billion. The National Bank of Cuba has provided disaggregated annual investment data (1976 = 2.37 billion pesos, 1977 = 2.54, 1978 = 2.7, 1979 = 2.85, and 1980-target = 2.65) whose total is similar to Castro's figure.⁹ If the total investment figure is correct, it means that in the recession period of 1976-80 there was an increase of 76 percent of investment over the boom period of 1971-75. (Such high investment for 1976-80 seems incompatible with Palari's report—quoted above—that the worst variant of the investment plan was selected and still twenty-two investment projects were cut.) The annual investment figures indicate that in 1976-79 the growth of investment surpassed that of GNP and that the investment ratio (over GNP) was a constant 27 percent, the highest in Cuban socialist history, except perhaps for 1968, the dreary year of the Revolutionary Offensive. This suggests that consumption must have been significantly reduced in the second half of the 1970s.

Another resemblance with the Mao-Guevarist years of high capital accumulation was the dispersion of investments among too many projects, as a Vice-President of JUCEPLAN has acknowledged: "We started many projects of

[large] magnitude at the same time [and this] prevented us from finishing some of them on time. . . . Many projects begun in this five-year period [1976-80] will be completed in the next."¹⁰ Other practices reducing investment efficiency were: absence of a research basis for the investment plan, excessive centralization of investment but very poor coordination, failure to assure all needed elements and technological imports, lack of a policy of depreciation and replacement, scarcity of investment-project specialists, and poor objective evaluation of investment efficiency.¹¹ In spite of some administrative decentralization introduced in the 1970s, investment is still basically financed by the state budget. The original SDPE included a "development fund" fed by part of the enterprise profits and used for reinvestment in its expansion. Eventually the fund was discarded, therefore investment is not currently made according to enterprise profitability but by central decision according to national needs and priorities.¹²

3. Hurricanes and Agricultural Plagues

Two hurricanes and three devastating pests seriously affected agricultural output in 1979-80. Hurricane Frederick struck Cuba in 1979 and its heavy rains generated losses of 120 million pesos; mainly afflicted were plantations of citrus fruits, tubers, vegetables, rice and cacao; floods harmed the extraction of salt, damaged the largest textile factory and one electric plant, and paralyzed the work in quarries which in turn provoked a cut in cement output.¹³ Hurricane Allen hit the Isle of Youth in August 1980 and, among other things, blew 25,400 tons of grapefruit off the trees.¹⁴ This makes it hard to believe the officially reported twofold increase in citrus production in that year (see Table 2).

Sugarcane plantations were shattered at the end of 1979 and through 1980 by an epidemic of roya (cane smut or rust). This blight is caused by a parasitic

fungus housed in the roots of the cane, which dries its leaves, and paralyzes the growth of the plant. The epidemic mostly attacked the variety of sugarcane with the highest yield and adaptability, "Barbados 43-62" (developed in Barbados in 1943 and introduced in Cuba in 1962), which was planted on one-third of sugarcane land. However, only one million tons of sugar were lost in the 1980 harvest, because most of the infected cane was ground and sugar extracted although at a very low yield. The infected cane seed had to be extracted, all fields disinfected and rust-resistant cane varieties planted.¹⁵

Castro and other Cuban officials have suggested that the epidemic was not naturally induced but U.S. "planted."¹⁶ And yet Cuba's top scientific agricultural journal has reported that the blight began in Africa in 1977, particularly in Angola, and was also observed in the Dominican Republic; from there it spread in 1978-79 to ten countries in the Caribbean Basin (including Cuba) and Florida. The journal acknowledged that the combination of high temperature and humidity, present in Cuba in 1978, contributed "to the high incidence of the disease."¹⁷

Another type of parasitic fungus, "blue mold" (because of the bluish color the leaves take), struck tobacco plantations at the end of the 1978-79 harvest and destroyed from 20 to 27 percent of the crop causing a loss of 100 million pesos. In the following year (1979-80) the epidemic wiped out 95 percent of the crop with losses reaching 400 million pesos. At the end of 1979 Cuba had to import 300,000 tons of tobacco from Spain; in 1980 the harvest declined to one-eighth of the 1978 harvest, all tobacco factories were shut down, 26,000 workers were laid off, exports of tobacco products were suspended, and rationing of cigars and cigarettes tightened.¹⁸ The fungus was resistant to known fungicides; eventually a new fungicide from Switzerland proved to be effective but it was in short supply, very expensive, and time-consuming, complex and costly in its application: it had to be used in the specified quantity to

avoid gradual adaptation of the fungus to it; it had to be applied by hand to the entire plant (badly contaminated plants had to be burned); nursery seeds also had to be sprayed and humidity controlled; and tobacco planted for self-consumption had to be banned because being outside of pest control it could become a permanent focus of infection for commercial plantations. As with the sugar rust, Cuban officials insinuated deliberate U.S. "planting" of the disease, but this was contradicted by the director of Cuba's Plant Sanitation, Ministry of Agriculture, who reported that: the fungus had been endemic in Cuba for the last twenty or thirty years (in 1957-60 it became active and harmed three consecutive harvests); the wind blows the spores which can travel as much as 200 miles by air or can be carried in people's clothing or by birds; the epidemic afflicted the Caribbean, Canada and the United States causing in the latter \$250 million in losses; Cuba requested and received help from a U.S. Department of Agriculture technician and a Cuban specialist was allowed to consult with U.S. experts at the tobacco research center in Lexington, Kentucky; and climatic factors (high temperature, heavy rains and humidity) determined the rapid spread of the disease in Cuba.¹⁹

An epidemic of porcine colera or African swine fever wiped out hogs in the province of Guantánamo and infected pigs in two other eastern provinces. As with the sugar and tobacco pests, insinuations of deliberate infection were soon dismissed when it was reported that Haitian immigrants carrying live pigs in their boats introduced the disease in Cuba.²⁰ The supply of meat to the population was affected also by a 7 percent decrease in the cattle population, due mainly to a significant reduction of cattle raised by private farmers. To compound the problem, poultry imports from a socialist country did not materialize and forced slaughtering of underweight cattle.²¹

4. Delays in the Mechanization of the Sugar Harvest and Expansion of Mill Capacity

The mechanization of the sugar harvest has advanced fastest in lifting the cut cane: 97 percent in 1980 vis-a-vis a goal of 100 percent. A close second is plowing: 90 percent in 1980 vis-a-vis a goal of 100 percent. Cleaning the cane of leaves and the pinnacle is done in "conditioning centers." In 1970 there were some 300 of these centers which mechanically cleaned 25 percent of all cane cut; in 1980 511 centers were reported and if they had the same capacity possibly cleaned 53 percent of the cane. The last to be mechanized has been cutting the sugarcane: in 1971-76 the proportion of mechanized cutting rapidly increased from 2 to 33 percent at an annual average of 6 percentage points, but by 1980 mechanization had risen to only 45 percent, a significant slowdown in the process of mechanization (at half the rate of growth of 1971-76) and considerably below the 1980 goal of 60 to 80 percent.²² Most surprising is that in 1977-80 mechanization of cane cutting was expected to receive a big push with the inauguration in Holguin, in 1977, of a factory that would turn out 600 KTP harvesters annually. One year after its inauguration the factory had only produced 300 units, and output was probably 350 units each in 1979 and 1980; thus the KTP factory is producing about half of what was originally planned. There is no official explanation for this problem; it might have been caused by nondelivery of vital components of the KTP harvesters which are produced in the USSR or by technical problems in the factory itself. Additional problems in the sugar harvest were the delay in the delivery of 300 Japanese tractors, and interruptions caused by mechanization because heavy machines are paralyzed when it rains. The slowdown in canecutting mechanization has reversed the 1971-76 declining trend in the number of canecutters; in 1978 there were 143,000 canecutters and their number jumped to 190,000 in 1980 despite a goal to reduce them to 50,000.²³

The 1976-80 plan envisaged the construction of four new sugar mills to expand installed capacity by 500,000 tons, and the rebuilding and modernization

of at least twenty-one of the existing mills to boost capacity by another one million tons. The first new sugar mill was completed in the spring of 1980 and the second later that year, with a combined 200,000-ton capacity; the other two sugar mills were reported near completion towards the end of 1980. Therefore none of the four new sugar mills could contribute to the sugar harvests during the 1976-80 plan.²⁴ Concrete information has not been provided on the modernization program; however, Castro reported in the fall of 1980 that frequent breakdowns in the old mills had become a "real headache" and that 10 percent of the work schedule was lost due to those breakdowns. He also related difficulties with centrifuges imported from Poland, delays in the supply of spare parts, interruptions in the cane supply to the sugar mills created by workers' weekend rest, and uncontrolled burning of the cane causing sugar loss.²⁵ To cope with some of these problems the grinding period gradually increased from 99 days in 1975 to 118 days in 1979. At the same time, the industrial sugar yield dramatically fell from 12.44 in 1975 to 10.82 in 1980.²⁶

5. Difficulties in the Nickel and Fishing Industries

After three consecutive years of steady nickel output at 37,000 tons, there was a decline in 1978 and a further decrease in 1979 to 32,000 tons (the lowest output in eleven years), but in 1980 the previous output level was recuperated (see Table 2). (Contrary to claims from some Cuban officials, nickel's total output in 1976-80 was 1,000 tons below the 1971-75 total.)²⁷ The official explanation for the 1978-79 decline in output was the renovation of the twenty-year-old plant at Moa.²⁸ The initial nickel output goal for 1980 was 100,000 tons but it was later reduced to 47,000 tons. The latter was to materialize by raising the actual capacity of the two nickel plants (Moa and the older Nicaro), something which obviously did not happen. Original expectations that the first stage of the new nickel plant in Punta Gorda would

start operations by 1980 (producing 10,000 tons) were soon discarded due to considerable building delays. The plant was promised by the Soviets as early as 1972 but apparently they had to use hard currency to acquire the equipment and this prompted the stall. A crucial question is whether the Punta Gorda plant will use the same technology as the old plants or a more fuel-efficient technology. Cuba's nickel deposits are laterite ores with low nickel content, which because of high energy consumption associated with extraction are eight to ten times more costly to process than sulfides (which use flotation rather than thermal energy). In the 1940s and 1950s, when the first two Cuban nickel plants were built by the United States, oil was relatively cheap and extraction was profitable.²⁹ But, as Castro has acknowledged, the nickel industry is now "ruined" due to its obsolete technology: while nickel prices had increased 40 percent by 1979, oil prices had jumped fifteenfold.³⁰ Because of Soviet subsidies to the price of nickel imported from Cuba and of oil exported to Cuba, the latter profits from its selling of nickel to the USSR but not so with the rest of the world. Still, because of the oil subsidy, Cuba has an advantage over other countries which use the same technology: thus, in 1980, the oil component of total production costs in Cuba was 19 percent as opposed to 34 percent in the Dominican Republic. But Cuba is at a serious disadvantage with those countries which either have sulfide ores or use a more fuel-efficient technology.³¹ According to a U.S. specialist, in late 1977 the Soviets approached Western engineering firms to acquire the more efficient technology for the Punta Gorda plant but, due to the high hard-currency expenditure involved, they apparently "decided to replicate the existing twenty-year-old nickel plant [technology]." Later, the same specialist had a meeting with Cuban nickel technicians in which they assured him that they had obtained a technology similar to the one used in Australia.³² I have been unable to obtain

such a clear-cut answer from Cuban officials. Castro has recently stated somewhat ambiguously that: "In mining, the most efficient methods must [instead of will] be used to extract full value from existing mineral deposits on the basis of low energy technologies."³³ Finally, the U.N. Economic Commission for Latin America in its 1980 report on the Cuban economy suggests that Punta Gorda will use the old technology: "When the new nickel plant is operating at full capacity it will require a higher supply of oil at subsidized prices unless the increase in the price of nickel in the international market makes its production profitable."³⁴

Fishing was a continuous success story of the Revolution until the second half of the 1970s: production grew steadily and by 1974 it was 194,000 tons, 7.5 times that of 1958. The first decline (13 percent) occurred in 1975, there was a recuperation in 1976 and a new decline in 1977, then in 1978 the highest production ever was followed in the next year by a sharp drop (27 percent); in 1980 output, although increased, was below the 1976 level (see Table 2). In 1971-75 the total fishing catch jumped by more than 100 percent over the previous period, but in 1976-80 growth slowed down to 29 percent. The principal reason for the output oscillations and slowdown in the second half of the 1970s has been the universalization of the 200-mile fishing limit which has restricted the Cuban fishing fleet's access to traditional fishing waters and forced its transfer to farther zones. In addition: there has been a deficient utilization of available resources; fishing vessels were probably used to transport Cuban troops to Angola; in 1979 Peru cancelled a profitable fishing agreement with Cuba; the largest seafood nursery (in San Antonio) was destroyed in 1979 by the pollution caused by an oil tanker which sank close to it; and the U.S.-Cuban fishing agreement which had been informally in operation since 1978 was rejected in 1980 by the U.S. Senate.³⁵

6. Complications in the Implementation of the SDPE

In an interview I had in mid-1979 with two top Cuban planners, they assured me that all elements of the new system of economic management and planning (SDPE) which began to be introduced in 1976 would be fully in force nationally by the end of 1980: economic calculation, self-financing, contracts among enterprises, labor norms (or output quotas), collective incentive funds, and price reforms.³⁶ A few months before our conversation, JUCEPLAN had released the results of a national survey checking the implementation of twenty different aspects of the SDPE in all enterprises in the pilot plan. The survey found that numerous enterprises did not apply or violated the new system in terms of accounting, costs, capital amortization, labor norms, inventories and so forth, while revealing that half of their administrators had not been trained in management schools.³⁷ In 1980 it became obvious that none of the elements of the SDPE would be in operation at the end of that year: although 95 percent of enterprises were using "principal elements" of economic calculation, its full implementation was postponed until 1981 and the same was said of self-financing and contracting among enterprises; labor norms were functioning in only 59 percent of the enterprises (covering 75 percent of their workers) and full coverage was not expected until 1982; the collective incentive fund was being applied to only 7 percent of the enterprises and national implementation was delayed until 1981-85; and the reform of wholesale prices was deferred for 1981, that of retail prices for 1981-85, and the entire price system for 1986-90.³⁸

A new national survey on the SDPE, done in February 1980, made a thorough analysis of the serious difficulties encountered in the four-year implementation of the system.³⁹ The report is one of the longest, most complex, and boring Cuban documents I have ever read but, if one has the necessary background and

is armed with the patience of Job, it is quite revealing. Its description of the problems confronted by the SDPE is appalling while the list of recommendations is not only long but of such a magnitude that it becomes utopian, and it lacks any guidelines in terms of priorities. The overall impression conveyed by the document is that too many reforms were simultaneously introduced, lacking sufficient material and human basis, and with excessively centralized control but ineffective coordination.⁴⁰

Some of the overall deficiencies listed were: lack of, obsolete or frequent breakdown of equipment; insufficiently qualified and stable personnel; poor discipline in enforcing the plan and applying its methodology; deficient, inconsistent and delayed data; constant changes, serious incompatibilities, and lack of coordination between goals and allocated inputs; excessive centralization and inflexibility, and insufficient input from lower echelons; too aggregated targets which are difficult to implement; and a very high volume of administrative work. Some astronomical figures can better illustrate the latter: the planners released 102,047 rules on consumption, 334 volumes to partly cover wholesale prices, 10,428 labor-organization measures, and 1,282 material balances. It was also reported that 43 percent of the data requested from enterprises was unnecessary hence increasing their burden and taking time from vital chores.

It is impossible in this paper to cover the entire SDPE report, hence I have chosen only a few of its important aspects for illustration. Credit: in 1979, 20 percent of loans taken by state enterprises from the National Bank were 45 to 90 days behind payment deadlines; the proportion increased to 26 percent in 1980 for a total of 1.4 billion pesos in unpaid loans. Inventories: 39 percent of the enterprises did not report inventories and 49 percent did not submit lists of unused inventories; as a result some enterprises were shut down for lack of supplies while other enterprises sat idle. Prices: inspections

revealed that there was a very high incidence of violations of state-fixed prices, 500 cases were in court, and a good number of violators had been fined or imprisoned. On the other hand, due to price rigidities, out-of-fashion merchandise was stock-piled in inventories and perishable goods were lost.

Contracts: unfulfillment of contracts among enterprises was widespread, largely because of no application of sanctions to violators; this resulted in no deliveries, delays or deficient products causing a chain reaction of bottlenecks. Quality Controls: 30 percent of the enterprises lacked controls altogether and inspections revealed that 90 percent of the products did not meet the quality norms. Training: 30 percent of directors of central agencies had not received training in management schools and, in some key agencies, the proportion was even higher, e.g., 41 percent in the sugar industry.

7. Deterioration in the Supply and Quality of Consumer Goods

In a previous work I have compared rationing quotas in Cuba in 1962-79 finding that there was a significant reduction of quotas in the late 1960s, a noticeable improvement through most of the 1970s, but a deterioration in 1978-79 (and possibly in 1980). In spite of the temporary improvement in the 1970s, rationing in 1978-79 was tougher than in 1962: quotas of fourteen (out of nineteen products compared) were lower, two were stagnant, and only three were higher.⁴¹ Another comparison, conducted by the Swedish economist Brundenius, on the consumption per capita of forty-two food and beverage products in 1963-78 shows that consumption of two-thirds of those products peaked in 1972-76 with a high concentration in 1975.⁴² The CIA has recently published a similar study based on Cuban data comparing official per capita distribution of five major food groups and eight major staples in 1965-78; it shows that distribution of 75 percent of the products peaked in 1971-76 and 25 percent in 1965-70 while none peaked in 1977-78.⁴³ Unfortunately, these studies do not cover the recession years of 1979-80 in which distribution of consumer goods must have

deteriorated due to: the agricultural plagues, the decline in fishing output, the cut in imports of foodstuffs from market economies (e.g., powdered milk, beans), and the delays or suspension of deliveries of some foodstuffs from socialist countries (e.g., poultry).⁴⁴ The increase in investment in the second half of the 1970s at higher growth rates than GSP also confirms our conclusion that consumption deteriorated particularly at the end of the decade.

Cuban leaders have tried to compensate the meager distribution of rationed consumer goods with a series of market mechanisms such as the parallel market (where consumer goods produced in excess of the amount needed for rationed supply are sold at state-fixed prices which approximate the market price) and free peasant markets (in which agricultural products—except beef, coffee and tobacco—are sold at free market prices). These markets provide important incentives for the higher income brackets, but prices of products sold on such markets are not affordable by the majority of the population: the median wage in Cuba is 150 pesos monthly (more on this later).

One of the most interesting interviews recently transmitted by Cuban TV was with the Minister of Food Industry in the fall of 1980. Prior to the program, there were more than 1,000 calls to the station and a survey was also conducted on consumer dissatisfaction. Several journalists asking the questions said that "a large part of the population" had "expressed concern" on the supply or quality of consumer goods such as milk, meat, bread, refreshments, beer, cigarettes and matches. Specific complaints were voiced on: the high price of powdered milk; the suspension of the fresh milk quota to children when they reach seven years of age while fresh milk is sold in the parallel market at 3 pesos per gallon; delays and uncertainty in the distribution of rationed beef, cheating in the weight of meat, and scarcity of poultry; stale or burnt bread being sold and scarcity of crackers and cookies outside of Havana; problems in the distribution of refreshments due to insufficient

bottles and caps; low quality, uncleanness, lack of pasteurization, and "foreign objects" inside of bottles of beer (thousands of cases of beer had to be recalled and still 1,000 reached the consumers); quality of cigarettes seriously affected and sticks found in them; etc.⁴⁵

An external factor, the visit of 125,000 Cuban exiles in 1979 and early 1980, contributed to aggravate the situation. The exiles arrived at the time when the economy had deteriorated and made things worse with their phenomenal demonstration effect of the consumer society. The visitors brought expensive gifts to relatives and friends (or bought them at exorbitant prices in state tourist shops), showed photos of their homes, cars and other consumer goods, and described with Latin zeal their "good life" in the United States. Thus Cubans suffering from twenty years of scarcity contrasted first-hand their frugal existence with that of their relatives and friends living abroad. Cuban officials who have referred to this problem have tried to reduce its importance. Thus Carlos Rafael Rodríguez has said that "some people think we did not foresee" that the influx of Cubans from abroad "would create problems." Acknowledging that a negative effect of the visits had been "the erroneous stimulation of hopes of the U.S. way of living," he nevertheless claimed that only a minority of the population had been influenced.⁴⁶ The impact should have been wider as the 1980 exodus of 125,000 Cubans suggested; afterwards visits of exiles have been reduced to a trickle by the Cuban government.

8. "Softening", Low Labor Productivity and Unemployment

Not different from other societies, the severe economic deterioration in Cuba was accompanied by an increase in crime. By the end of 1979, Castro reported that many employees were stealing from their enterprises and delinquent attitudes had also spread to the masses: from 20 to 30 percent of

the bus ridership did not pay their fares and 90,000 illegal wires had been connected to steal electricity. At the same time, officials in high positions were taking advantage of their jobs to get privileges and this created irritation and set a bad example. To combat crime and corruption Castro asked for 4,000 more policemen, 1,100 patrol cars and new prisons.⁴⁷ The SDPE report also revealed that enterprise revenues often were not deposited on time thus facilitating "illegal appropriation of funds."⁴⁸

Labor productivity steadily declined in 1977-79 reaching 0.8 percent in the latter year. Then Paul Castro bitterly complained that "problems of indiscipline, lack of control, irresponsibility, complacency and negligence [aggravated our] notorious lack of efficiency." He reported labor absenteeism, deliberate slowdowns to avoid overfulfilling already low labor norms (work quotas), deals among foremen and workers to meet the norm in half a day or fulfillment of two or three work quotas in a single day to have free days in which to do nothing or to do something else that brought in more money.⁴⁹ In spite of tough measures and appeals, in the first half of 1980, 26 percent of enterprises under SDPE had suffered a decline in productivity over the previous year.⁵⁰

The best description of the situation in 1979-80 has been given by Fidel Castro:

A number of bad habits were spreading Perhaps it was felt that [the reforms of the 1970s would] perform miracles and that everything would get much better automatically . . . there were increasing signs that the spirit of austerity was flagging, that a softening up process was going on in which some people tended to let things slide, pursue privileges, make accommodations, while work discipline dropped. Our worst enemies could not have done us more damage. Was our Revolution

beginning to degenerate? . . . We must deal firmly with the first signs of petit bourgeois accommodation or undisciplined attitudes and even the slightest evidence of corruption.⁵¹

Aggravating these problems there was an increase in unemployment at the end of the 1970s as the demand for labor decreased while the labor supply bulged due to the entering into the labor market of the baby boom of 1959-65 (birth rates climbed from 2.8 to 3.5 percent in that period, thereafter declined reaching 1.7 percent in 1978).⁵² The SDPE put emphasis on the reduction of labor costs, and labor organization measures were to result in a cut of 55,232 workers.⁵³ In addition, the SDPE collective incentive fund was expected to make managers and workers more interested in manpower reduction in order to save and increase profits (more on this later). At the end of 1980, a new system of "free labor contracting" was introduced allowing managers to promptly fire unneeded or troublesome workers (something that previously took considerable time and effort) and be free to hire the most qualified manpower.⁵⁴ The economic deterioration of 1979-80 induced a cut in investment while postponement of imports of equipment and inputs for factories provoked shutdowns and slowdowns. The 1976-80 plan had originally envisaged an expansion of construction activities, but the lack of resources, exportation of cement (to obtain desperately needed foreign exchange) and delays in imports of construction materials left 60,000 to 70,000 workers jobless.⁵⁵ In addition, the blue-mold epidemic resulted in the temporary dismissal of 26,000 tobacco workers. Those unemployed by conjuctural problems (interrumpidos) did not lose the linkage with their enterprise and were paid 70 percent of their salaries. But placing those permanently left out (disponibles) became a difficult task as they often turned down jobs as inadequate.⁵⁶

Lack of adequate jobs seems to have been a cause behind the massive exodus of 1980. A sample taken among those sixteen years and older who came to the United States showed that an average of 5 percent were unemployed in Cuba with a much higher proportion among females (13 percent) than males (4 percent). When these figures were adjusted following U.S. definitions all the rates increased: total unemployed 6 percent, females 25 percent, and males 5 percent.⁵⁷

The current situation is expected to continue through the next quinquennium since the labor supply will not decline until late in the decade. The major mechanism to cope with the problem is the exportation of the labor surplus. Some 30,000 to 40,000 jobs were probably available after the great exodus of 1980, and Castro has made clear his interest in an orderly transfer of disenchanted Cubans to the United States. Currently there are some 20,000 Cuban civilians working abroad (e.g., in Algeria, Libya, Iraq, Nicaragua, Grenada) as part of lucrative service contracts which generated 125 million pesos in 1980. On the other hand, the possibility of significantly expanding Cuba's military force abroad is small due to increasing domestic defense needs (real and imagined), and political and economic costs of military campaigns.⁵⁸

In the 1930s a high number of Cuban workers will go to those COMECON countries which have labor deficits. At the end of 1979 Castro announced that some 10,000 Cubans would be sent to cut timber in Siberia in exchange for wood badly needed on the island. Carlos Rafael Rodríguez has also reported that agreements have been signed with Czechoslovakia, the GDR and Hungary to supply them with low-skilled manpower in exchange for products that Cuba needs.⁵⁹ Additional measures have been taken in the domestic market to ease unemployment, thus the 1981-85 plan foresees that the female share of the labor force will be stagnant.⁶⁰ (No wonder the percentage of unemployed females who left in 1980 was so high.) In the sugar industry, extra labor shifts were

introduced in the 1980-81 harvest to take advantage of "large labor surpluses" in some provinces (this measure was rejected as wasteful in the early years of the Revolution when there was a manpower deficit); after the harvest is over, the "surplus personnel" are expected to be involved in other agricultural chores.⁶¹ But the most important step is the expansion of the private sector in agriculture and personal services both to create new jobs and to increase the supply of foodstuffs and services provided by carpenters, mechanics, electricians, tailors, laundresses, etc. Private farms and small service shops are now allowed to hire employees directly.

9. The Economic Cost of the African Involvement

In a well-documented study on this subject Sergio Roca concludes: "It is incontrovertible that Cuba's involvement in Africa, in both the military dimension and its civilian aspect, has imposed a severe burden on the domestic economy."⁶² In 1965, the last year for which we had figures before the state budget was dropped for one decade, military expenditures took 5.2 percent of Cuba's GNP. In the first half of the 1970s military expenditures probably declined as the U.S. threat against Cuba diminished, but since 1975, with the Cuban involvement in Angola, military expenditures probably increased and by 1978 had reached 7.2 percent of GNP. In 1965, defense and internal order accounted for 8.4 percent of the total Cuban budget and, again, that proportion probably declined in the first half of the 1970s.⁶³ As Table 5 shows, the proportion in 1978 has risen to 8.6 percent and in 1979 increased again to 8.9 percent, there was a decline to 8.5 percent in 1980 but still higher than the 1965 proportion. Obviously, scarce resources which could have gone into production or services for the population have been invested in the African military adventures.

The deployment to Africa of administrators, technicians, mechanics, truck drivers and other qualified personnel has deprived the domestic economy of

TABLE 5

Percentage Distribution of Expenditures in the State Budget in Cuba: 1978-1981

Items in the Budget	1978	1979	1980	1981
Financing of the economy ^a	43.9	41.3	41.7	41.7
Health, education, culture, etc.	29.2	31.1	32.7	29.3
Housing and community services	3.6	4.2	3.8	3.7
Public administration ^b	5.9	5.5	5.1	6.0
Defense and internal order	8.6	8.9	8.5	7.5
Other activities ^c	4.4	4.8	4.7	6.9
Reserve ^d	<u>4.4</u>	<u>4.2</u>	<u>3.5</u>	<u>4.9</u>
TOTAL	100.0	100.0	100.0	100.0

a Productive activities.

b State agencies, OPPs and judiciary.

c In 1962-65 this item was called "Payment of the public debt".

d For contingencies.

Sources: 1978 Granma, December 23, 1977; 1979 Granma Weekly Review, January 21, 1979, p. 3; 1980 Granma Weekly Review, January 6, 1980, p. 3; and 1981 Bohemia, January 2, 1981, p. 58.

badly needed cadres. In 1979, the President of JOCEPLAN acknowledged that Cuba's involvement in Africa had negatively affected the implementation of the SDPE "because many valuable technicians have been sent away to those countries thus depriving our internal tasks of their availability and experience."⁶⁴

Service contracts involving civilian activities are more difficult to judge since most of them involve a benefit for Cuba. The question is whether revenue generated by the use abroad of Cuban physicians, dentists, teachers, nurses and construction workers significantly offsets the diminution of services to the Cuban population. Finally, Cuban military involvement in Africa may have contributed, at least partly, to the suspension, cut or nonrenewal of economic and technical aid to Cuba in 1976-78 from Sweden, Holland, Norway, West Germany, and Canada.⁶⁴

A VIEW TO THE NEXT QUINQUENNium: 1981-85

If two single words could characterize the outlook of the next quinquennium they would be caution and frugality. The brief euphoria of the mid-1970s boom has been substituted by a much more down-to-earth, Spartan mentality based on the realities of the late 1970s. Castro warned at the end of 1979 that in confronting its problems Cuba would not turn to radical solutions or move to extremes.⁶⁵ In other words, the Island will continue in the orthodox Soviet path without deviations to the "left" (Mao-Guevarism) or to the "right" (Titoism). In 1980, when sugar prices began to rise in the international market, Castro quickly admonished that the mistake of the 1970s will not be repeated, the leaders and the masses should not have illusions of spending more: "There will be no spectacular leap in our people's living standard" And later he said: "[We are] working toward long-range solutions, that we will not be able to provide now nor put into practice until after the next five years."⁶⁶ Referring to the fiasco of 1976-80, Castro said that the 1981-85 plan had been

drawn based on reliable figures and employing the most realistic criterion possible: "The main idea is to surpass, not fall short of the plan goals; to pledge the Party to carry out the possible, not the impossible."⁶⁷

To reduce the risk of unfulfillment of the plan targets for 1985, Cuban planners not only set relatively modest goals but also tried to protect themselves. In a seminar in Havana in 1980, a top official from JUCEPLAN reacted to my skeptical analysis of the feasibility of the 1981-85 targets (based on the official published figures) by saying that he was against fixing concrete production targets but favored, at most, setting the installed output capacity.⁶⁸ Some of the original output targets of the plan were significantly reduced at the time of its approval, e.g., 500,000 tons less for sugar, 400,000 tons less for cement, 300,000 tons less for citrus, 95,000 square meters less for textiles.⁶⁹ And one of the few modifications introduced into the law on the five-year plan was to suspend the obligation of meeting the plan targets annually, so that planners and managers will enjoy more flexibility in the overall fulfillment of the goals.⁷⁰

The cautiousness of the planners becomes apparent when the overall targets for 1981-85 are contrasted with those for 1976-80 (see Table 1). Still it is important to point out that most targets for the first year (1981) of the current five-year plan were set below the annual average for the quinquennium. This suggests either that the planners are expecting a significant recuperation of the economy in the next four years or that, in spite of their apparent cautiousness, they were still taken by the old optimistic spirit (more on this later).

The annual average rate of GSP growth is set at 5.1 percent in 1981-85, lower than the 6 percent target of 1976-80 although higher than the actually accomplished rate of 4 percent; but the target for 1981 is set at 3.9 percent,

lower than the annual targets for both five-year plans and actual performance in 1976-80. The same is true of the rate of labor productivity set at 3.3 percent for 1981-85, less than half the 1976-80 target rate and also smaller than actual performance in the same period; the 1981 target is 3 percent, lower than the average rate set for 1981-85.

Total investment for 1981-85 is only slightly higher than in the previous quinquennium (actually lower if inflation is taken into account); this means that the increase in investment at current prices in 1981-85 will be from 15 to 20 percent compared with an increase of 76 percent in 1976-80 over 1971-75; the investment target for 1981 is set at 2.8 billion pesos, 300 million below the average annual investment target for 1981-85. Although capital accumulation, in constant dollars, will be smaller in the current quinquennium, there seems to be a commitment to increase the efficiency of investment by: avoiding its excessive spread among too many projects and concentrating it in a small number of important projects; completing investment projects initiated in 1976-80 before starting new ones; and reducing the period of maturation of investment.⁷¹ This investment policy is similar to the one practiced in 1971-75 and, if truly enforced, it should pay dividends. Investment efficiency may be negatively affected, however, by several problems: the leadership decision not to introduce the "development fund" (based on enterprise profitability) and its replacement by centralized allocation (based on other criteria) compounded with poor central coordination; the high percentage of state enterprises that do not repay loans on time; current price distortions (to continue through 1981-85 due to the delay in price reform) which impede an objective evaluation among alternative investment projects; and the lack of a policy of depreciation and replacement.

Table 2 provides additional evidence of the planners' circumspection in setting output targets for the current quinquennium. Out of fifteen output

targets which are comparable in 1981-85 over 1976-80: five are smaller in 1981-85—from 2 to 31 percent (i.e., nickel, tobacco, cement, fish and shoes); three are stagnant or slightly higher—from zero to 6 percent (milk, rice and pork); three are moderately higher—from 14 to 16 percent (sugar, eggs and textiles); and four are substantially higher—from 33 to 300 percent (citrus, electricity, steel and radios).

We lack data on the 1976-80 and 1981-85 targets for foreign trade and, hence, goal comparisons are impossible. However, the 1981-85 targets, when contrasted with actual performance in the previous period, indicate a slight rise in the rate of exports and imports with an increased trade-partner concentration with the USSR (from 63 to 65 percent) and reduction of trade with other socialist countries (from 13 to 4 percent). The most surprising figure is the increase of trade with the USSR projected as 50 percent for 1981-85, similar to the 1976-80 target but considerably below the actual increase of 173 percent in 1976-80 and also below the increase of 66 percent in 1971-75 (see Table 1).

All projected increases in social indicators for 1981-85 (except for housing) are quite modest. The target for day-care-center construction in 1985 is smaller than the target for 1980. The 1985 goal for enrollment in middle schools involves a minor increase (about 3 percent) compared with a jump of 157 percent in 1980 over 1975 but this may be the result of an approximation to universal coverage in secondary education. The reduction of the ratio of inhabitants per physician projected for 1985 is also quite modest but the ratio in 1980 was already one of the lowest in the Western Hemisphere. Conversely, the housing-construction target for 1981-85 is an anomaly in the overall planning picture for the quinquennium: an increase of 141 percent over the actual number of dwellings built in 1976-80. However the goal for 1976-80 was also overoptimistic and eventually unfulfilled by almost one-half.

The target in the 1981 plan—20,000 dwellings—is more realistic, half of the annual average set by the five-year plan and only 5,000 more than the dwellings actually built in 1980. Even this modest increase in 1981 does not seem to be supported by the proportion of state budget expenditures allocated to housing. Table 5 shows that such proportion in 1981 was smaller than those in 1980 and 1979. The budget distribution clearly indicates that in 1981 proportionally less resources will go to social services; thus, in addition to the cut in the share of housing, the share of health, education and culture is reduced by 3.4 percentage points. All this is consistent with the policy, which began in the 1970s, of changing the emphasis in distribution from one based on need (typical of the 1966-70 Mao-Guevarist period) to one based on work. In 1979 Castro announced that "social consumption" (i.e., social services and goods provided free by the state based on the idealistic distribution according to need) would be reduced in 1981-85.⁷² The SDPE envisages the continuous elimination of "unnecessary gratuities" (free social services and goods) and to that effect a list has been compiled of those services and goods now provided free which may be susceptible to a charge.⁷³ It is foreseen that by 1985 the overall distribution of consumption would be 80 percent individual and 20 percent social.⁷⁴

The overall economic performance in the next quinquennium is going to depend on the amount and efficiency of investment (already discussed), the performance of key productive sectors such as sugar and nickel (both in output and prices), the economic aid provided by the USSR, and labor productivity which is tightly connected with incentives. An analysis of the last three factors follows.

1. Evaluation of the Feasibility of Output Targets

The sugar industry will maintain its predominant role in the Cuban economy. The Vice-President of JUCEPLAN has affirmed that the dependency on sugar will

continue in the future and that the sugar sector will be the principal source of capital accumulation in 1981-85. Furthermore, "according to plans that have been outlined for the development strategy up to the year 2000, one of the bases of Cuba's industrialization will be the sugar industry."⁷⁵ The original sugar output target for 1981-85 set an increase of 30 percent over 1976-80, for an annual average output of 9.1 million tons and a 1985 target of 10 to 10.5 million tons.⁷⁶ Later on the target was scaled down to an increase of from 20 to 25 percent in the period, for an annual average output of from 8.3 to 8.7 million tons, and a 1985 target of 9.5 to 10 million tons.⁷⁷ In order to reach such a reduced target, several premises will have to materialize and I have serious doubts about many of them. All the rust-infected sugarcane was scheduled to be replanted by the spring of 1981, about 350,000 Ha.; in November 1980, 160,000 Ha. should have been replanted but, due to heavy rains, only 100,000 Ha. actually were. Even before this delay (in August 1980), it was forecast that sugarcane yields in 1981 would be only 28 to 33 percent of the average of 1976-79. Towards the end of 1980 it was acknowledged that the recuperation of the 1978-79 sugar output levels would be difficult to achieve and that the 1981 and 1982 harvests would still be affected by the epidemic.⁷⁸ The number of cane conditioning centers planned for 1985 is insufficient: they should be able to mechanically clean only from 46 to 49 percent of the target harvest of 9.5 to 10 million tons, a reduction in relation to 1980 when the centers cleaned 53 percent of the cane.⁷⁹ I have explained already that mechanization of cane cutting was well behind schedule in 1980 (45 percent versus an initial target of 80 percent, later reduced to 60 percent); the target for 1985 is 50 percent (only 5 percentage points more than in 1980), thus the increment in sugar output planned for 1985 (from 42 to 50 percent more than in 1980) will have to be achieved with a substantial addition in manpower, not an easy task indeed. Finally, crucial

to achieving the output goal of 9.5 to 10 million tons for 1985 is the completion of eight new sugar mills in 1981-85 (an additional seven mills are also planned to be started in this period), each with a grinding capacity of 100,000 tons, plus the enlargement of nine other mills and the modernization of another fourteen.⁸⁰ In order to evaluate the feasibility of this task, one must recall that the 1976-80 plan contemplated the construction of four new mills, however only two were finished by mid-1980, and two were reported "near completion" by the end of that year, but none was operational during the plan. In 1979, Cuba's installed milling capacity was close to 8 million tons, hence the addition of all twelve mills could increase capacity to 9.2 million; the additional 300,000 to 800,000 tons required to reach the output goal then must be produced in the nine enlarged mills. Notice that some of this "added" capacity only compensates for the destruction and deterioration of old mills, thus while in 1959 there were 161 mills, this number decreased to 152 in 1969 and 148 in 1979. In summary, even if all of the above premises are fulfilled, it will be practically impossible to achieve the 1985 sugar goal unless Cuba launches a gigantic mobilization similar to that of 1970 and that may also turn out to be a second Pyrrhic victory. Without such mobilization, output would probably be between 8.6 and 8.8 million tons.

The nickel output target for 1985 (69,500 tons) is to be achieved with an expansion of 32,500 tons over existent capacity with the schedule shown in Table 6. Initially, the total output now planned for 1986-90 was expected to be achieved in 1976-80, hence one must be cautious as to the feasibility of the 1985 target. The probability of reaching 46.5 tons is high but the completion of the first two stages of the Punta Gorda plant by 1984 is less probable. Even if the new plant is completed, there is the question of whether or not it will have a more fuel-efficient technology.

The overall increase in fishing output for 1981-85 is planned to be 1,249,000 tons for a boost of 33.9 percent over the previous five years,

TABLE 6

Increase in Nickel Output Planned for 1981-90

Years	Installed Capacity (in thousand tons)				
	Nicarao	Moa	Punta Gorda	CALC I Samaritoca	TOTAL
1981	18.0	19	0	0	37.0
1982	22.5 ^a	19	0	0	41.5
1983	22.5	24 ^a	0	0	46.5
1984	22.5	24	23 ^b	0	69.5
1986-90	22.5	24	30 ^c	30	106.5

a Overhauling and expansion of existing plants.

b Stage one (11,000) and two (12,000) of new plant become operational.

c Stage three (7,000) becomes operational.

Sources: Proyecto de Lineamientos . . . , p. 14; Banco Nacional de Cuba, Highlights of Cuban Economic Development . . . , p. 12; and Quesada, August 1980.

higher than the 28.7 increment of 1976-80 over 1971-75. In view of the difficulties experienced in the previous quinquennium to fish in territorial waters which were accessible prior to 1975, the current quinquennium target is somewhat optimistic. Since part of the fishing fleet has been transferred to more distant new zones, its operation is probably more costly and its return less predictable; future investment in the expansion of the fleet must be made according to accessibility to closer and more profitable fishing zones.⁸¹

Castro has predicted an annual rate of increase of 10 percent in fishing output in 1981-85.⁸² I do believe that output in the current quinquennium will be as erratic as in the previous one, that the overall target for 1981-85 will not be fulfilled, and that the probability of reaching 300,000 tons in 1985 is not high: a target of 250,000 to 260,000 tons seems more feasible in view of the 1960-1980 trend.

In spite of the blue-mold epidemic, the 1985 output target of 55,000 tons of tobacco is not too unrealistic. In 1976 the tobacco harvest yielded 51,000 tons; after a decline of output to 40,000 tons in 1978, due to low state prices, Cuba significantly raised the acopio price to private farmers who produce 79 percent of the total tobacco output. Unfortunately, the blight hit the next two harvests and the impact of the new incentives was lost. But the epidemic now seems to be under control, tobacco (unlike sugarcane) is an annual cultivation, 66,000 Ha. of tobacco were reportedly planted in 1980, and a good harvest is expected for 1981.⁸³ On the other hand, the recuperation of the traditional quality of the Havanas will require at least three years since it takes a blend of tobacco from three or four crops to produce the best cigars. But the quantity target of cigars to be produced in 1985 is remarkably modest (similar to that of 1976-78, prior to the epidemic) and hence will probably be overfulfilled.

Economic incentives such as credit facilities and higher prices to private farmers and increased wages to workers on state plantations seem to have worked well also in coffee. The private sector produced 82 percent of the coffee crop in 1967 but only 45 percent in 1978 and output declined accordingly from 34,000 to 13,000 tons. With the new incentives, private-farm output increased to 60 percent of total output in 1980 and production vigorously recuperated in 1979-80; still the 1985 target appears too high.

In the industrial sector, the target for electricity output in 1985 (15,000 Mkw) is quite ambitious. At the end of 1980, total installed capacity was 850 Mw; new thermal plants under construction total 325 Mw: 100 Mw in Mariel, 100 Mw in Santiago, and 125 Mw in Nuevitas. If other thermal plants are to be started in 1981-85 it is doubtful they will be completed during that period, and the "Jaraguá" nuclear plant will not enter into operation until 1986-90 because of delays caused when Cuban geologists discovered that the plant was being built in a seismic zone.⁸⁴ The expanded capacity in thermal plants will be 38 percent over 1980 capacity and yet the planned output increase is more than 48 percent. Even if we assume that Cuba will get all the needed oil to operate these plants and that the frequent breakdowns are kept at a minimum, a target of less than 14,000 Mkw seems to be the maximum achievable.

The remarkable boost in cement output planned for 1985 (an increase of 70 percent for 4.9 million tons) is to be reached with the construction of two cement plants both provided by the GDR. The first plant is being built in Cienfuegos with a total capacity of 1.65 million tons; its first unit became operative in 1980, while the second and third units should begin production in 1981-85; when all three units are in full production, Cuba's total cement output should be 4.3 million tons.⁸⁵ It should be noted, however, that although the first unit began its production in 1980, it added only some 180,000 tons over the output of 1978 (the year 1979 is not taken as a base due to the

decline in output caused by Hurricane Frederick), perhaps because that unit will not be fully operative until 1981. The second cement plant with a projected capacity of 1.4 million tons is to be built in Mariel; although we have practically no information on this plant, my educated guess (based precisely on the lack of data) is that it will not be fully operational by 1985 and thus cement output should be between 3.7 and 4.3 million tons.

The 1985 output target for textiles also appears quite ambitious: 325 Mm^2 , a more than twofold increase over the 1980 output. The new plant, "Desembarco del Granma," with a 60 Mm^2 capacity, was reported open by the end of 1980 but obviously did not increase the stagnant textile output of 1977-80 (at 152 Mm^2). A second plant, to be supplied by the USSR, will be built in Santiago with an 80 Mm^2 capacity, and the old plant in Ariguanabo is to be expanded by 25 to 35 Mm^2 .⁸⁶ If all these ambitious projects materialize, the 1985 target will be fulfilled, but the chances are that it will not be by a significant margin.

Other pretentious industrial output targets are in steel and fertilizers. To achieve a 450 percent increase in steel output the existing steel plant, "Antillana de Acero," will be expanded and a new steel mill built in Holguín; my prediction is that the goal will be grossly underfulfilled. The Cubans had serious problems with the nitrogenous fertilizer plant of Cienfuegos and the Soviets had to give them a hand, but there is a new plant being built in Nuevitas and the target increase of 32 percent seems feasible.⁸⁷

In the "productive service" sector, tourism is the major source of foreign exchange. The number of foreign tourists in 1971-75 increased from about 2,000 to 38,000 and the number kept climbing in 1976-78 so that in the latter year 96,652 tourists visited the Island. In 1979, with the governmental opening of doors to Cuban exiles, the number of all foreign tourists probably

reached its height under the Revolution: an estimated 196,000 visitors. But the incidents in the spring of 1980 both cooled the desire of exiles to return to the fatherland and made the Cuban government more selective about visas. Therefore, the total number of tourists apparently declined to 125,000 or less, significantly below the 300,000 tourist goal set for that year. The screening of Cuban exiles has significantly increased in 1981 and the Reagan administration's strong position against Cuba will probably discourage some U.S. tourists, thus less than 100,000 tourists are expected to visit Cuba this year. Playing it safe, the planners have not set a goal for 1985, although thirteen new hotels are scheduled to be built in 1981-85, about half of the number constructed in the previous quinquennium.⁸⁸

The analysis of the feasibility of output targets for 1981-85 suggests that, in spite of the first impression of planners' caution, most of the goals are too optimistic. Out of the twenty targets for 1985 shown in Table 2, I estimate that: eleven will be unfulfilled by a significant degree (sugar, nickel, citrus, steel, cement, textiles, electricity, radios, fishing, and salt); six will be close to fulfillment (tobacco and coffee—if private incentives continue—, milk, fertilizers, shoes and pork); and two will be overfulfilled (eggs and tobacco).

2. Foreign Trade and Economic Aid

The guidelines for the 1981-85 plan state that Cuba's economic development will depend greatly on foreign trade and the generation of external credits: "Cuba needs external financing to give a push to output in key economic branches. . . ." The guidelines prescribed greater integration with the USSR and other socialist economies and less dependence on trade with market economies.⁸⁹ In spite of this, although the five-year plan forecasts that Cuba's trade with the USSR will increase from 63 to 65 percent, it indicates that trade with other socialist countries should decline from

13 to 4 percent, while trade with market economies should increase from 23 to 31 percent (see Tables 1 and 4).

At the end of October 1980, after five months of negotiation—well beyond the expected deadline—Soviet and Cuban representatives signed in Moscow the 1981-85 trade agreement. It provides for an increase of 50 percent in trade between both countries, a modest target when compared with the 173 percent increase of 1976-80.⁹⁰ The protocol for the Soviet-Cuban agreement on credit and economic cooperation for 1981-85 was not signed until April 1981 when the annual plan was already in effect. According to the brief Cuban press release, the agreement covers the "largest investment made so far in Cuban-Soviet cooperation, and will practically double [in 1981-85] Soviet cooperation with Cuba in 1976-80."⁹¹ However total Soviet-Cuban economic cooperation in 1976-80 increased by 154 percent over 1971-75, a much larger increment than the one projected for the current quinquennium. It may be that the nature of that cooperation will be different with more being provided by the USSR in development credits, which are repayable, and less in nonrepayable trade subsidies. The total cumulative Soviet economic aid given to Cuba in 1960-79 amounted to \$16.7 billion, about one-third in repayable loans and two-thirds in nonrepayable subsidies. (In 1979 alone, Cuba received \$3.1 billion in Soviet economic aid—\$8.5 million daily—equal to \$315 per capita and one-fifth of Cuba's GSP in that year.) However, the distribution of that aid changed drastically through the last decade greatly benefiting Cuba: in 1971-75 57 percent was in loans and 43 percent in subsidies; while in 1976-80 13 percent was in loans and 87 percent in subsidies.⁹² The increasing Cuban trade deficit with the USSR in 1979-80 and the possibility that the adjustment mechanism introduced in 1975 has been substantially modified suggest a reversal in the distribution of Soviet economic aid. Another important innovation in the 1980s is that Cuba is placing emphasis on obtaining external financing,

especially from the USSR, with amortization based on transfer of part of the output of the plant built with foreign credit, thus one-half of the output of the Punta Gorda nickel plant is scheduled to be transferred to the USSR.⁹³

As mentioned above, trade with other socialist countries is expected to decline not only in relative but also in absolute terms. Based on official Cuban targets and figures I have estimated that Cuban trade with socialist countries (other than the USSR) will be 1.7 billion pesos in 1981-85, about one-third of the amount in 1976-80 and the lowest volume of trade with that group of nations in any five-year period since 1966. Cuban trade with those socialist countries increased by 34 percent in 1971-75 and by 61 percent in 1976-80 but seems to be scheduled to decline by -64 percent in 1981-85. A U.S. specialist on East-West trade has reported that Soviet pressure on Eastern European countries to share the Cuban burden has been unsuccessful and that these countries are increasingly dissatisfied with the heavy Soviet subsidies provided to Cuba.⁹⁴ Castro's complaints, at the end of 1979, of problems with imports from Poland and other unidentified socialist countries, and the SDPE report's reference to "import uncertainty" of countries that supply Cuba and do not "stick to delivery schedules"⁹⁵ are indications of potential mutual dissatisfaction between Cuba and other socialist countries.

The trade deficit planned by Cuba for 1981-85 is about 1.5 billion pesos, similar to the deficits in the previous two quinquenniums (see Table 1). Since Cuba is planning to increase its trade with the USSR (and if the 1979-80 trend continues), most of that deficit will be with the Soviets. The planned increase in trade with market economies is probably based on the expectation of high sugar prices and surplus or balanced trade with the West. This would be extremely important for Cuba because by 1979 its debt with western countries was about \$3 billion, resulting in an annual payment of \$150 million in debt service.⁹⁶ In the 1981 Cuban budget the line which shows the highest rise

over 1980 is "other activities" with a 2.2 percentage point increment; that line was previously called "payment of the public debt"; another line experiencing an unusual jump (1.4 percentage points) is the suspicious "reserve" (see Table 5). I have already discussed the significant decline in loans provided by western banks to Cuba at the end of the 1970s; in 1980 Switzerland canceled a loan of 30 million Swiss francs, and in 1981 Credit Lyonnais also canceled a loan for 150 million DM. The escalation in debt service payments may force the USSR to come to the rescue of Cuba with hard currency if sugar prices deteriorate in 1981-85.

Vital for Cuba's economic development in the next five years is the supply of oil, practically all of which is imported from the USSR taking from 11 to 13 percent of Soviet deliveries to all COMECON countries. According to Castro, the USSR has indeed guaranteed 97 percent of the oil supply in the next quinquennium, but he has reported a planned increase of 10 to 15 percent of available fuel in 1981-85 or 2 to 3 percent annually.⁹⁷ This appears as a significantly lower rate than that of the 1970s: imports of all fuels increased at an average annual rate of 5 percent in 1971-75 and 6.6 percent in 1976-79, while oil consumption in 1976-80 rose at a rate of 6.9 percent.⁹⁸ This apparent slowdown in oil supply must affect industrial expansion (particularly electricity) and economic development in general. In 1980, Venezuela suspended the annual supply of 3 million barrels of oil that had been initiated in 1978 as a result of an agreement with the USSR. On the other hand, in 1981 Mexico and Cuba signed an agreement by which Mexico's state oil corporation (PEMEX) will explore oil and gas deposits in Cuba, sell 10,000 metric tons of liquid gas plus an unspecified amount of lubricants, rebuild an old gas liquification plant, and expand an oil refinery in Cuba. In April 1981 it was announced the PEMEX technicians had discovered oil deposits on Cuba's

northern coast close to Havana; however PEMEX has refused to confirm or deny this reported discovery.⁹⁹ Even more important, in May it was reported that Mexico and the USSR have agreed that the former should supply most Cuban oil needs while the USSR would supply oil to such Mexican oil importers as India, Yugoslavia and Spain. Although this exchange agreement still maintains the burden of the subsidies on Soviet shoulders, it would free Soviet oil tankers and significantly reduce the cost of freight for Cuba.¹⁰⁰

Still one of the most important factors shaping the Cuban economy in 1981-85 will be the price of sugar in the international market. As Table 3 shows, the price increased in 1979-80, but peaked at 35.7 cents per pound in the last quarter of 1980 and fell to 24.8 cents in the first quarter of 1981. Prices continued to deteriorate in April and May reaching a low of 14.9 cents. Sugar futures in May, however, showed a tendency to increase, fluctuating between 14.9 and 17.9 cents per pound.¹⁰¹ The price boom at the turn of the decade was a deviation from a normal ten-year price cycle caused by a sudden sharp decline in world production. The USSR had a terrible sugar beet crop and faced a deficit of at least 3 million tons in 1980-81. Cuba was hit by the sugar rust and lost 1.2 million tons in 1980, which forced an equal reduction of Cuba's exports to several countries, mainly the USSR, and the latter had to increase its purchase of sugar in the international market. Brazil's expected increase in sugar exports (some 300,000 tons more) did not materialize because a large strike of canecutters affected output and the Iran-Iraq war forced an increase in its fuel alcohol production from sugar. A serious drought in Peru transformed this country from exporter to importer of sugar. And the same blight that affected Cuban cane plantations spread through the Caribbean especially hitting the Dominican Republic.¹⁰² By the end of 1980, however, Cuba reported that its harvest that year had been 6.8 million tons (as much as one million tons higher than Western estimates)

and that the epidemic was under control. Increasing world sugar output in 1981-82 is expected when several Caribbean countries recuperate previous output levels; and sugar exports from Brazil (in part encouraged by the 1981 world oil glut), Central America, and the Philippines should also increase in response to high prices. In the United States, the world's largest consumer, a decline in sugar consumption is forecast as sugar is replaced by high fructose corn syrup. Still there is a possibility of some modest increases in prices in the next five years depending on world sugar supply.¹⁰³ If Cuba's planned increases in sugar output materialize in 1982-85 they will reduce the world deficit, pushing sugar prices down.

3. Productivity, Economic Incentives and Ideological Hangovers

A series of reforms introduced in 1980 has increased incentives to raise productivity among workers and farmers. These reforms are positive but often the stimuli are not strong enough and in other cases conflict with politically or ideologically motivated priorities and policies.

Introduction of a general wage reform began in mid-1980 with the objective of increasing productivity, efficiency and achieving a better distribution of the labor force. When the reform is finally implemented, 600 million pesos will be distributed in wage and salary raises. The old wage scale is now considered inadequate, too egalitarian, hence the reform will expand wage differentials according to functions and responsibility: managers should earn a wage higher than that of the most qualified personnel under their supervision; special wage systems are introduced for airplane pilots and ship captains, as well as for highly qualified technicians; and civilians working abroad are paid an extra 20 percent over their regular salaries. In addition to the basic wage, there are extra payments for overtime and work performed under dangerous or strenuous conditions, bonuses for fulfilling and overfulfilling

work quotas, and a collective incentive fund connected with enterprise profitability.¹⁰⁴ The latter should create a "vested interest" of the workers in fulfilling the enterprise output targets and reducing costs because these, in turn, would increase the profit, the fund, and the workers' share.¹⁰⁵ The fund is divided roughly into one-third for collective facilities (e.g., socio-cultural activities, clubs, gymnasium, vacations or housing—but no more than 60 percent in the latter) and two-thirds in individual monetary shares (which cannot exceed twenty days' wages). When the collective fund was tested in 1979 in 7 percent of Cuban enterprises, less than one-third of them earned a profit and a right to the fund; among those few which qualified, the individual annual share fluctuated from 37 to 103 pesos per capita, not too powerful an incentive even in Cuba's frugal economy.¹⁰⁶ Another problem with the wage reform is that it has a ceiling of 450 pesos and, although there are exceptions, if that maximum is thoroughly enforced, it will result in salary cuts for top personnel, thus the wage pyramid will be truncated with not enough "legal" incentives in the apex.

A special system of wages and incentives for sugar workers was also introduced at the end of 1980 to increase productivity and output, and raise their low living standards in order to attract more manpower to the vital sugar sector. Workers receive a 15 percent raise (on top of any other wage-reform increment) plus 10 percent for fulfilling the output quota over a two-week period with 80 percent attendance in the field. New awards in kind include 700 cars to be sold to those with high productivity (400 of them for technicians and 300 for workers), 1,500 motorcycles, 500 air conditioners, and 500 trips to socialist countries. Extra labor shifts have been introduced so that rest is guaranteed to all workers during the harvest. A larger number of houses has been promised to sugar workers, as well as a better supply and

higher quality of work clothing and equipment and strengthening of work safety. A final bow to pragmatism: military service is waived for student graduates who sign for a number of years in the sugar sector.¹⁰⁷

Incentives to private farmers are geared to increase the output of key cultives like tobacco and coffee; those stimuli include higher prices for acopio and better credit facilities. In 1980 free peasant markets were introduced allowing the private farmers to sell their products at the price set by supply and demand; the revenue from these sales cannot be invested in land or heavy equipment but can be spent for consumer goods or deposited in banks.¹⁰⁸ These important incentives, however, are countered with some ideological goals and red tape such as the creation of a tax on farmers' income, state pressures to merge private farmers into cooperatives, and delays in state payments due for acopio deliveries.¹⁰⁹

Since the late 1970s self-employment in services not only has been permitted but encouraged by state authorities. There are few regulations, hiring of workers is now permitted by the new system of free labor contracting, and state enterprises can contract with artisans and the self-employed, providing them with inputs in exchange for 30 percent of their profit. The rapid expansion of this sector can be measured by the phenomenal growth of classified ads published in the magazine Opina, the only Cuban publication in which the forces of supply and demand have a free (paid) hand. There are offers of repair work for all types of consumer durables imaginable, as well as for houses and cars; personal services are advertised from magicians and clowns to gardeners and masseurs; and even services to state enterprises are listed, such as studies on productivity and book accounting.¹¹⁰ But the government has imposed a tax on self-employment income (admittedly hard to collect) and has recommended the creation of self-employed cooperatives to facilitate taxation and other types of control.¹¹¹

Overall incentives for the population with higher income include supply of certain consumer goods at dear prices, and the parallel market in which surplus products are sold at a state-fixed price which reflects supply-and-demand "equilibrium prices." According to a top official of JUCEPLAN, the high prices of these goods is an incentive to improving the population's skills, labor effort, and income. The parallel market is also a mechanism for the gradual elimination of rationing but to what degree is a matter of controversy: pragmatists seem to favor a rapid expansion of the parallel market in order to enhance incentives and eliminate rationing; others more ideologically inclined are cautious. The Vice-President of JUCEPLAN was asked in a published interview if the continued existence of rationing did not clash with incentive mechanisms for remuneration according to work. He answered positively adding that those who work harder and earn higher wages should be able to get more goods, thus to fully implement the principle of payment according to work, rationing must be eliminated. The state—he continued—guarantees stable prices of basic products for lower income brackets of the population even if this means a subsidy to imports so that the low-income consumer does not have to bear the price increase; but this policy affects the higher-income consumer because it reduces the nation's capacity to import expensive products such as TV sets or alcoholic beverages.¹¹² And the official party newspaper has said:

Despite inflation the world over, which has a particular effect on such an open economy as Cuba's, retail [rationed] prices of basic items have remained frozen at the levels of the early years of the Revolution. The objective was not to hurt the household economy, but this has meant large state subsidies that go against the necessary equilibrium in internal financing.¹¹³

And yet the line is held at the point where the leadership senses political trouble, thus increases in prices should not be higher than wage increases and essential consumer goods should not be transferred to the parallel market until they are in abundant supply (certainly not in 1981-85 but perhaps in 1986-90).

Another conflict between ideology and pragmatism emerges with the use of voluntary labor. Although the latter was drastically curtailed in the 1970s and now can only be utilized when its net productivity is proven beforehand, the leadership still pays rhetorical homage to it. Paradoxically, the use of voluntary labor rewards tricky entrepreneurs who go for an easy peso but penalizes the morally-motivated administrator. It happens that under the SDPE, those enterprises which provide volunteers still have to pay their wages, with no production but cost increases, and hence less profits. On the other hand, many enterprises which receive the volunteers do not reimburse the corresponding labor value to the mobilizing agency, therefore increasing their output without a corresponding wage expenditure and thus boosting their profits. To add insult to injury, the time spent in voluntary labor is not technically considered as time worked and hence does not accrue to the collective fund share.¹¹⁴ It is obvious that with this kind of trouble the terminal defeat of voluntary-labor enthusiasts is just a matter of time.

Last but not least is the conflict of military expenditures versus development and consumption expenditures. This became evident in 1975-80 due to Cuba's military adventures abroad but has taken a domestic twist with the increased U.S. threat to Cuba under the Reagan administration. To confront the menace from the Colossus of the North, the Cuban leadership has resorted to TTM (Territorial Troop Militia) which should double or triple national defense by mobilizing from 150,000 to 300,000 militiapersons who are not members of the armed forces, their reserves or the civil defense. Castro has

stressed that the added military burden will not affect the economy and thus the motto for 1961-63 is "combining production and defense." Militiapersons do not receive any remuneration, they are trained after work hours or during weekends or vacations, and to supply them with weapons a national fund-raising campaign was initiated in early 1961.¹¹⁵ One of the first contributors was the poet laureate Nicolás Guillén who donated 50,000 pesos from his author's royalties (suggesting that in spite of the truncated wage pyramid the elite is still doing quite well) and on May Day more than 17 million pesos had been collected.¹¹⁶ In spite of the official claims, the new military mobilization involves substantial costs for the population: time taken away from study, rest and even productive work; resources extracted from the population for training, transportation, clothing and ammunition; and the permeating spirit of mobilization which was so catastrophic in the 1960s. I have estimated that the annual cost of this mobilization would be from 75 to 150 million pesos. Reiterating that production and development will not be neglected due to the defense effort, Castro exhorted in the 20th Anniversary of the Proclamation of the Socialist Nature of the Cuban Revolution:

We have to make an extra effort. It is true that this takes up a great deal of time . . . and energy . . . and it calls for resources. But our people have the ability of multiplying themselves [and] when circumstances so require, what normally takes two hours to do is done in one, and work goes on as necessary.¹¹⁷

This quote summarizes well the Spartan, frugal spirit of the third decade, not too different in this sense from the previous two, with predominant pragmatism and caution but amazing resilience of ideology and romanticism.

NOTES

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3. Proyecto de Lineamientos Económicos y Sociales para el Quinquenio 1981-1985 (La Habana, 1980), p. 6.
4. Gilberto Díaz, interview in Granma Weekly Review (Supplement), November 9, 1980, p. 3.
5. Eugenio F. Balari, director of Cuban Institute of Internal Demand, conversation in Havana, July 14, 1979.
6. Most of the information comes from F. Castro, "Discurso en la Clausura del II Período de Sesiones de 1979 de la Asamblea Nacional del Poder Popular, Palacio de las Convenciones, 27 de diciembre de 1979, Departamento de Versiones Taquigráficas", and "Main Report to the 2nd Congress of the C.P.C.," Granma Weekly Review, December 28, 1980, p. 6. The Economic Commission for Latin America, contradicting Castro's loan figure of \$40 million in 1979, has reported loans for \$230 million from nonsocialist sources (France, Japan and Belgium). See CEPAL, "Cuba: Notas para el estudio económico de América Latina, 1979," México, August 4, 1980, pp. 1, 22, 24.
7. CEPAL, "Cuba: Notas para el Estudio de América Latina, 1980," Mexico, April 9, 1981, pp. 4, 28.
8. Felino Quesada, Seminar of the Institute of Cuban Studies, Havana, August 4, 1980.
9. Castro, "Discurso en la Clausura del II Período . . ."; and Banco Nacional de Cuba, Highlights of Cuban Economic Development 1976-1980 and Main Targets for 1981-1985 (Havana, 1981), pp. 5-6, 16-17. Cuban statistical year-books have not reported investment figures since 1972.

10. Piaz, p. 2.
11. Comisión Nacional de Implantación del Sistema de Dirección y Planificación de la Economía (SDPE), Informe Central: Reunión Nacional SDPE (La Habana, July 1980), pp. 34-35.
12. Quesada, Havana, August 4, 1980.
13. CEPAL, "Cuba . . . 1979," pp. 1, 20.
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15. Information gathered in a discussion with Cuban sugar technicians in the sugar mill "30 de Noviembre," Pinar del Río, August 2, 1980.
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18. Virginia Hamill, "Blight Snuffs Out Tobacco Crop," Washington Post, March 15, 1980; John Koten, "Fungi Attack Cuba's Tobacco Fields," Wall Street Journal, March 26, 1980; and Castro, "Discurso en la Clausura del II Período . . .," and "Main Report to the 2nd Congress . . .," p. 6.
19. Pedro Luis Bernal, "Para controlar el moho azul," Cuba Tabaco, no. 2 (April-June 1980), pp. 8-17, and interview with Donn Shannon, "Cuba on Mend After Disease Wrecks Crops," Los Angeles Times, May 20, 1981, Business Section, p. 1.
20. There is enough evidence that the CIA had a role in inducing the previous (1970) epidemic of porcine colera. F. Castro first reported the 1979 epidemic in "Discurso en la Clausura del II Período" Haitians were first identified as carriers by Los Angeles Times, February 12, 1980 and Washington Post, February 29, 1980. One week later Castro confirmed the U.S. reports in "Speech at the Closing Session of the 3rd Congress of FMC," Granma Weekly Review, March 16, 1980, p. 3.

21. Castro, "Discurso en la Clausura del II Período . . .," and "Main Report to the 2nd Congress . . .," p. 1; also Banco Nacional de Cuba, p. 14.

22. 1970-79 actual figures and 1980 goals come from my book The Economy of Socialist Cuba, table 13; 1980 actual figures are from Proyecto de Lineamientos . . ., p. 3, and F. Castro, "Main Report to the 2nd Congress . . .," p. 7 and "Speech to Close the 16th Congress . . .," pp. 2-4.

23. Same sources as above, and F. Castro, "Speech at the Closing of the Second Session of the National Assembly of People's Power," Granma Weekly Review, January 11, 1981, p. 2. Castro has manipulated the data by stating that the 190,000 sugarcane cutters in 1980 were "75,000 less than in 1971-75" ("Main Report to the 2nd Congress . . .," p. 7); if the comparison had been made with 1975-78, the result would have been an increase in canecutters.

24. Mesa-Lago, The Economy of Socialist Cuba, chapter 4; interview at sugar mill "30 de Noviembre," August 2, 1980; and Proyecto de Lineamientos . . ., p. 3.

25. F. Castro, "Speech to Close the 16th Congress . . .," pp. 2-4.

26. Mesa-Lago, table 12; CEPAL, "Cuba . . . 1979," p. 16, and "Cuba . . . 1980," p. 5.

27. Vice-President of JUCEPLAN Díaz (p. 2) has stated that "nickel" production levels have increased over these five years [1976-80]."

28. Quesada, Havana, August 4, 1980.

29. Mesa-Lago, chapter 4; and Theodore H. Moran, "The International Political Economy of Cuban Nickel Development," in Cuba in the World, Cole Blasier and C. Mesa-Lago, eds. (Pittsburgh: University of Pittsburgh Press, 1979), pp. 257-272.

30. F. Castro, "Discurso en la Clausura del II Período . . ."

31. CEPAL, "Cuba . . . 1980," p. 16.

32. Lawrence H. Theriot et al, "Soviet Economic Relations with Non-European CMEA: Cuba, Vietnam and Mongolia," Joint Economic Committee, Soviet Economy in Time of Change (Washington, D.C., GPO, vol. 2, 1980), pp. 562-563; and Theriot information given in Washington, D.C., October 24, 1980 and April 9, 1981.

33. F. Castro, "Main Report to the 2nd Congress . . .," p. 9.

34. CEPAL, "Cuba . . . 1980," p. 16.

35. F. Castro, "Discurso en la Clausura del II Período . . ."; Proyecto de Lineamientos . . ., p. 3; Quesada, August 4, 1980; and Sergio Roca, "Economic Aspects of Cuban Involvement in Africa" and Jorge Pérez-López, "Comment: Economic Costs and Benefits of African Involvement," in Cuba in Africa, C. Mesa-Lago and June Belkin, eds. (Pittsburgh: Latin American Monograph and Document Series, no. 3, 1981).

36. Felino Quesada (director of SDPE implementation) and Francisco Martínez Soler, Havana, July 12, 1979.

37. SDPE, Plenaria del Chequeo sobre el Sistema de Dirección y Planificación de la Economía (La Habana: JUCEPLAN, February 16, 1979).

38. Proyecto de Lineamientos . . ., pp. 3, 6; Comisión Nacional de Implantación . . . SDPE, pp. 131, 233, 247-248; and F. Castro, "Main Report to 2nd Congress . . .," p. 8.

39. Comisión Nacional de Implantación . . . SDPE, 250 pages. All subsequent references in the text come from this source.

40. In several parts of the report, when problems attributable to the central administration are dealt with, the key paragraph is deleted or appears in a different type than in the rest, e.g., pp. 15, 95, 129.

41. Mesa-Lago, The Economy of Socialist Cuba, chapter 7, table 41.

42. Claes Brundenius, "An Assessment of Basic Needs Satisfaction in Cuba, 1958-1978," University of Lund, October 1980, tables 1A-1C.

43. CIA National Foreign Assessment Center, The Cuban Economy: A Statistical Review (Washington, D.C., March 1981), tables 13 and 15. I excluded meat from the comparison due to lack of data for 1965-70.

44. F. Castro reported some of these problems in his "Discurso en la Clausura del II Período . . ."

45. Interview with Alejandro Roca, Minister of Food Industry, Industria Alimenticia (November-December 1980), pp. 8-21.

46. Carlos Rafael Rodríguez, interview with Marta Harnecker, "Cuba: Grandes interrogantes," Areíto, 7:25 (1981):11. Castro also referred to some negative effects of the visit but pointed out it generated 100 million pesos in foreign exchange ("Discurso en la Clausura del II Período . . .").

47. Castro, "Discurso en la Clausura del II Período . . ."

48. Comisión Nacional de Implantación . . . SDPE, p. 94.

49. R. Castro, "Speech at the Main Event to Commemorate the 23rd Anniversary of the November 30 Uprising," Granma Weekly Review, December 9, 1979, p. 2.

50. Comisión Nacional de Implantación . . . SDPE, p. 126.

51. F. Castro, "Main Report to the 2nd Congress . . .," p. 13.

52. For a detailed discussion of unemployment in 1959-1979 see my The Economy of Socialist Cuba, chapter 6.

53. Comisión Nacional de Implantación . . . SDPE, p. 166. The same report (p. 17) states that "there are limitations imposed on the economy which restrict the possibility of creating new jobs."

54. Quesada, August 4, 1980; and Latin America Weekly Report, October 31, 1980.

55. F. Castro, "Discurso en la Clausura del II Período . . ."

56. Roberto Veiga, "Informe Central al XIV Congreso de la CTC," Granma, November 30, 1978, p. 4.

57. Robert L. Bach et al, "The Flotilla Entrants: Latest and Most Controversial," Cuban Studies/Estudios Cubanos, 11:2 (July 1981): .
58. See Cuba in Africa, C. Mesa-Lago and June Delkin, eds. (Pittsburgh: Latin American Monograph and Document Series, no. 3, 1981).
59. Rodríguez, pp. 8-9; and Proyecto de Lineamientos . . . , p. 23.
60. Proyecto de Lineamientos . . . , p. 10.
61. F. Castro, "Speech to Close the 16th Congress . . . ," pp. 2-4.
62. Roca, p. .
63. SDPE, Plenaria del Chequeo . . . , p. 31.
64. Roca, pp. . ; and Pérez-López, pp. .
65. F. Castro, "Discurso en la Clausura del II Período . . . "
66. F. Castro, "Speech at the Rally to Celebrate the 20th Anniversary of the CDRs," Granma Weekly Review, October 5, 1980, p. 3, and "Main Report to the 2nd Congress . . . ," p. 9.
67. F. Castro, "Main Report to the 2nd Congress . . . ," p. 6.
68. Quesada, August 4, 1980.
69. Comparison between original targets published in Proyecto de Lineamientos . . . and final targets published by Banco Nacional de Cuba, pp. 7-8.
70. "Dictamen del Proyecto de Ley del Plan Unico de Desarrollo Económico-Social del Estado para el Quinquenio 1981-1985," Granma Resumen Semanal, January 11, 1981, p. 3.
71. F. Castro, "Main Report to the 2nd Congress . . . ," p. 9; and Díaz, p. 2.
72. F. Castro, "Discurso en la Clausura del II Período . . . "
73. Comisión Nacional de Implantación . . . SDPE, p. 2.
74. Quesada and Martínez Soler, July 12, 1979.

75. Díaz, p. 3. In spite of my efforts, I have been able to obtain only one document on the 1980-2000 plan and it is not too useful: Humberto Pérez, Elaboración de los estudios de la estrategia de desarrollo perspectivo económico y social hasta el año 2,000 (La Habana: CICT-JUCEPLAN, no. 3, 1979).

76. Proyecto de Lineamientos . . . , p. 12; and Juan Varela Pérez, "The Sugar Industry," Granma Weekly Review (Supplement), November 9, 1980, pp. 6-7.

77. Banco Nacional de Cuba, pp. 7-8.

78. F. Castro, "Speech at the Rally to Commemorate the 27th Anniversary of the Attack on Moncada," Granma Weekly Review, August 3, 1980, p. 3, "Speech to Close the 16th Congress . . . ," p. 4, and "Main Report to 2nd Congress . . . ," p. 9; and Varela, pp. 6-7.

79. Based on my own calculations: assuming that the average capacity per center is 7,000 tons during the harvest, in 1985 for a harvest of 9.5 to 10 million tons, 661 conditioning centers should handle from 46 to 49 percent of the cane.

80. It is not clear whether the eight new mills projected for 1981-85 include the two which were almost completed at the end of 1980. On my visit to the "30 de Noviembre" (Pinar del Río province) mill on August 2, 1980, I was informed that a total of nine new mills will be in operation by 1985: the two already finished (in Pinar del Río and Camagüey provinces), the two to be completed in 1980-81 (in Cienfuegos and Granma provinces), and five more new mills (in Tunas, Villaclara, Matanzas, a second in Granma, and a second in Pinar del Río).

81. Quesada, August 4, 1980.

82. F. Castro, "Main Report to the 2nd Congress . . . ," p. 9; and Jesús Abascal, "Production of the Cuban Fishing Industry Between 1976 and 1980," Granma Weekly Review, February 15, 1981, pp. 1-2.

83. Financial Times, February 3, 1981.

84. Joaquín Oramas, "The Electric Industry," Granma Weekly Review (Supplement), November 9, 1980, pp. 8-9; F. Castro, "Discurso en la Clausura del II Período . . ."; and Proyecto de Lineamientos . . ., p. 13.

85. Quesada, August 4, 1980; and José Gabriel Gumá, "Industrial Construction," Granma Weekly Review (Supplement), November 9, 1980, pp. 12-13.

86. Díaz, p. 2.

87. Ibid., and Quesada, August 4, 1980.

88. F. Castro, "Discurso en la Clausura del II Período . . ." and "Main Report to the 2nd Congress . . .," pp. 8, 11, 13; and Banco Nacional de Cuba, p. 15.

89. Proyecto de Lineamientos . . ., pp. 5, 7.

90. The announcement of the trade agreement was made in Granma Weekly Review, November 9, 1980, p. 1. Both Cuban and Soviet planners had been working since 1978 to coordinate their five-year plans and the trade protocol was expected to be signed much earlier than October. See John E. Cooney, "Cuba Loosens Some Control on Economy," Wall Street Journal, October 31, 1980.

91. Granma Weekly Review, April 26, 1981, p. 8.

92. Based on data from CIA, p. 39, table 39; and my book The Economy of Socialist Cuba, chapter 2.

93. Proyecto de Lineamientos . . ., p. 23.

94. Theriot, et al, pp. 557, 564.

95. F. Castro, "Discurso en la Clausura del II Período . . ."; and Comisión Nacional de Implantación . . . SDPE, p. 200.

96. Theriot, pp. 564-565.

97. F. Castro, "Speech at the Rally . . .," p. 3, and "Main Report to the 2nd Congress . . .," p. 9.

98. Based on data from CIA, pp. 9, 23; and Theriot, pp. 558-559.

99. Marlise Simons, "Mexico in Broad Energy Accord with Cuba," Washington Post, February 8, 1981; Alan Robinson, "Pemex Reportedly Finds Oil Off Cuba," Journal of Commerce, April 17, 1981; and "Cuban Oil Find Unconfirmed by Pemex," Journal of Commerce, April 20, 1981. The original article on oil discovery was published in Excelsior (Mexico) attributing it to "sources close to the Cuban government."

100. "Central Regional Role for Mexico is Welcomed by Kremlin," Latin America Weekly Report, May 29, 1981, p. 6.

101. New York Times, Financial Section, April-May 1981.

102. Woodhouse, Drake and Carey, Market Report, September 22, 1980; and Latin America Commodity Report, October 10, 1980. The 1980 decline of sugar output in Cuba caused two odd trade operations: the Dominican Republic sold sugar to Cuba, in August 1980, through Czarnikow-Rionda New York; and Cuba bought a factory of fructose corn syrup from Sweden (Juventud Rebelde, June 17, 1980, p. 1).

103. U.S. Department of Agriculture, Sugar and Sweetener: Outlook and Situation (February 1981); and Robert D. Barry, "The Outlook for Sugar and Other Sweeteners: 1981-1985," American Sugarbeet Growers Association, Tucson, February 3, 1981.

104. "General Wage Reform," Granma Weekly Review, April 6, 1980, pp. 4-5.

105. Díaz, p. 4.

106. Comisión Nacional de Implantación . . . SDPE, p. 233.

107. F. Castro, "Speech to Close the 16th Congress . . .," pp. 2-3.

108. Quesada, August 4, 1980.

109. Proyecto de Lineamientos . . . , pp. 5, 8-9; and Comisión Nacional de Implantación . . . SDPE, p. 97.

110. Opina, January 1981, classified ads.

111. Proyecto de Lineamientos . . . , p. 9; and Comisión Nacional de Implantación . . . SDPE, p. 75.

- 112. Díaz, pp. 3, 5.
- 113. "General Wage Reform," p. 4.
- 114. Comisión Nacional de Implantación . . . SEPE, pp. 87, 241.
- 115. F. Castro, "Speech at the Ceremony to Set Up the Territorial Troop Militia Units," Granma Weekly Review, February 1, 1981, pp. 2-3.
- 116. Granma Weekly Review, February 8, 1981, p. 1; and Ibid., May 10, 1981, p. 2.
- 117. F. Castro, "Speech to Commemorate the 20th Anniversary of the Proclamation of the Socialist Nature of the Revolution," Granma Weekly Review, April 26, 1981, p. 3.